Kenneth Moore
DaimlerChrysler Corporation-Kokomo Transmission and Casting Plant
P.O.Box 9007
Kokomo, IN 46904

Re: 067-11990
Amendment to
ENSR No.: 067-10480-00065

Dear Kenneth Moore:

DaimlerChrysler Corporation-Kokomo Transmission and Casting Plant was issued a ENSR permit on March 8, 1999 for manufacture of Transmissions for automobiles and light trucks. A letter requesting changes to this permit was received on March 9, 2000. An amendment to this permit is hereby approved as described in the attached Technical Support Document.

The amendment consists of changing the PM/ $PM_{10}$ limit for #4 reverb furnace at the Casting Plant.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Gurinder Saini, OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call at (800) 451-6027, press 0 and ask for Gurinder Saini or extension 3-0203, or dial (317) 233-0203.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
GS
cc: File - Howard County
U.S. EPA, Region V
Howard County Health Department
Air Compliance Section Inspector - Ryan Hillman
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

# ENHANCED NEW SOURCE REVIEW (ENSR) AND SIGNIFICANT MODIFICATION TO PART 70 OPERATING PERMIT OFFICE OF AIR MANAGEMENT

## DaimlerChrysler Corporation - Kokomo Transmission & Casting Plant
## 2401 South Reed Road & 1001 East Boulevard
## Kokomo, Indiana 46904

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

| | |
|---|---|
| ENSR Permit No.: ENSR-067-10480-00065 | |
| Issued by:<br>Paul Dubenetzky, Branch Chief<br>Office of Air Management | Issuance Date: March 8, 1999 |

| | |
|---|---|
| Amendment No. 067-11990 | Pages Affected : 4, 15 and 16 |
| Issued by:<br>Paul Dubenetzky, Branch Chief<br>Office of Air Management | Issuance Date: |

# TABLE OF CONTENTS

**Compliance Determination Requirements**

D.9.2 Testing Requirements [326 IAC 2-1-3]
D.9.3 Particulate Matter

**Compliance Monitoring Requirements**

D.9.4 Visible Emissions Notations
D.9.5 Wet Scrubber Operating Condition
D.9.6 Baghouse Inspections
D.9.7 Broken or Failed Bag Detection

**Record Keeping and Reporting Requirements**

D.9.8 Record Keeping Requirements

**Malfunction Report**

## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information

The Permittee owns and operates a stationary source that operates machining, cleaning, heat treating, and marking facilities to produce transmissions for use in automobiles and light trucks.

| | |
|---|---|
| Responsible Official: | Kenneth Moore |
| Source Address: | 2401 South Reed Road & 1001 East Boulevard, Kokomo, Indiana 46904 |
| Mailing Address: | P. O. Box 9007, Kokomo, Indiana 46904-9007 |
| SIC Code: | 3714 & 3363 |
| County Location: | Howard |
| County Status: | Attainment for all criteria pollutants |
| Source Status: | Part 70 Permit Program<br>Major Source, under PSD Rules; |

### A.2 Emission Units and Pollution Control Equipment Summary

This stationary source consists of the following emission units and pollution control devices:

**Kokomo Transmission Plant:**

(a) One (1) Wheelabrator Multitable Shotblast Deburr identified as AAA006276, with a maximum steel shot blast recirculation capacity of 48,000 pounds per hour and parts throughput of 2315 pounds per hour, particulate matter controlled by a Centrispray wet collector identified as #180785 and exhausting at a stack identified as A;

(b) One (1) Wheelabrator #22 Super III Tumblast identified as AAA012334, with a maximum steel shot blast recirculation capacity of 56,760 pounds per hour and parts throughput of 2315 pounds per hour, particulate matter controlled by a Devansco wet collector identified as # 329053 and exhausting at a stack identified as B;

(c) One (1) Engineered Abrasive Shot Blaster identified as AAA018493, with a maximum steel shot blast recirculation capacity of 80 pounds per hour and parts throughput of 4000 pounds per hour, particulate matter controlled by a Torit cartridge bag house identified as # BH1 and exhausting inside the plant;

(d) One (1) Engineered Abrasive Shot Blaster identified as AAA018494, with a maximum steel shot blast recirculation capacity of 80 pounds per hour and parts throughput of 4000 pounds per hour, particulate matter controlled by a Devansco wet collector identified as #329053 and exhausting at a stack identified as B;

Kokomo Casting Plant:

(e) One (1) existing natural gas-fired aluminum melting reverberatory furnace, with a heat input capacity of 20 million British thermal units (mmBtu) per hour, melt rate of 6.5 tons aluminum and granular flux per hour and holding capacity of 82 tons, exhausting through stacks identified as 4RF and 4RCW. The existing furnace was originally permitted under Operation Permit No. 067-0002-0295 issued on November 13, 1990.

## SECTION D.9 FACILITY OPERATION CONDITIONS

**Kokomo Transmission Plant:**

(a) One (1) Wheelabrator Multitable Shotblast Deburr identified as AAA006276, with a maximum steel shot blast recirculation capacity of 48,000 pounds per hour and parts throughput of 2315 pounds per hour, particulate matter controlled by a Centrispray wet collector identified as #180785 and exhausting at a stack identified as A;

(b) One (1) Wheelabrator #22 Super III Tumblast identified as AAA012334, with a maximum steel shot blast recirculation capacity of 56,760 pounds per hour and parts throughput of 2315 pounds per hour, particulate matter controlled by a Devansco wet collector identified as # 329053 and exhausting at a stack identified as B;

(c) One (1) Engineered Abrasive Shot Blaster identified as AAA018493, with a maximum steel shot blast recirculation capacity of 80 pounds per hour and parts throughput of 4000 pounds per hour, particulate matter controlled by a Torit cartridge bag house identified as # BH1 and exhausting inside the plant;

(d) One (1) Engineered Abrasive Shot Blaster identified as AAA018494, with a maximum steel shot blast recirculation capacity of 80 pounds per hour and parts throughput of 4000 pounds per hour, particulate matter controlled by a Devansco wet collector identified as #329053 and exhausting at a stack identified as B;

**Kokomo Casting Plant:**

(e) One (1) existing natural gas-fired aluminum melting reverberatory furnace, with a heat input capacity of 20 million British thermal units (mmBtu) per hour, melt rate of 6.5 tons aluminum and granular flux per hour and holding capacity of 82 tons, exhausting through stacks identified as 4RF and 4RCW. The existing furnace was originally permitted under Operation Permit No. 067-0002-0295 issued on November 13, 1990.

### Emission Limitations and Standards

D.9.1 Nonattainment Area Particulate Limitations [326 IAC 6-1-2] and State Construction and Operating Permits: Emissions Limitations [326 IAC 2-1-5]

Pursuant to Nonattainment Area Particulate Limitations [326 IAC 6-1-2], the following facilities shall not allow or permit discharge to the atmosphere of any gases which contain particulate matter in excess of 0.03 grain per dry standard cubic foot (dscf)) as follows:

(a) DaimlerChrysler Corporation - Kokomo Transmission Plant:

| Process / Facility | PM Allowable Emissions | |
|---|---|---|
| | gr./ dscf | lbs./hour |
| Wheelabrator Shot Blaster Deburr (ID. #AAA006276) | 0.03 | 1.08 |
| Wheelabrator #22 Super III Tumblast (ID. #AAA012334) | 0.03 | 1.31 |
| Engineered Abrasive Shot Blaster (ID. # AAA018494) | | 0.13 |

| | | |
|---|---|---|
| Engineered Abrasive Shot Blaster (ID. # AAA018493) | 0.001 | 0.06 |

(b) DaimlerChrysler Corporation - Kokomo Casting Plant:

(1)

| Process / Facility | PM Allowable Emissions | |
|---|---|---|
| | gr./ dscf | lbs./hour |
| Aluminum Melting Reverberatory Furnace (No. # 4) | 0.03 | 4.6 |

(2) The furnace shall limit $PM_{10}$ emissions to less than 0.53 lbs per ton of melt. This will limit $PM_{10}$ to less than 15 tons per year and make 326 IAC 2-2 not applicable.
(3) only clean scrap shall be melted,
(4) the melt rate shall not exceed 6.5 tons per hour,
(5) only natural gas shall be utilized
(6) Upon construction and operation of the proposed furnace No. 4 issued under this construction permit, the existing Reverberatory Furnace D shall be permanently taken out of service.
(7) the Permittee shall not melt any scrap from outside sources. Therefore, the source will not be classified as a secondary metal processing plant, one of the 28 listed categories.

**Compliance Determination Requirements**

D.9.2 Testing Requirements [326 IAC 2-1-3]

Within 60 days after achieving maximum production rate but no later than 180 days after initial start-up, the Permittee shall perform particulate matter (PM) and PM-10 testing utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance. The PM and PM-10 emission limits specified in Condition D.9.1 for Wheelabrator Shot Blaster Deburr (ID. # AAA006276), Wheelabrator # 22 Super III Tumblast (ID.# AAA012334), Engineered Abrasive Shot Blaster (ID. # AAA018494), and Aluminum Melting Reverberatory Furnace (No. # 4) shall be determined by a compliance stack test conducted in accordance with Section C - Performance Testing.

D.9.3 Particulate Matter (PM)

(a) The Centrispray Wet Collector identified as # 180785 for PM control shall be in operation at all times when the Wheelabrator Multitable Shotblast Deburr identified as AAA006276 is in operation and exhausting to the outside atmosphere.

(b) The Devansco Wet Collector identified as # 329053 for PM control shall be in operation at all times when the Wheelabrator #22 Super III Tumblast identified as AAA012334 is in operation and exhausting to the outside atmosphere.

(c) The Torit Cartridge Bag House identified as # BH-1 for PM control shall be in operation

# Indiana Department of Environmental Management
# Office of Air Management

## Technical Support Document (TSD) for an Amendment to an Enhanced New Source Review and Significant Modification to Part 70 Operating Permit

**Source Background and Description**

| | |
|---|---|
| **Source Name:** | **DaimlerChrysler Corporation - Kokomo Transmission and Casting Plant** |
| **Source Location:** | **2401 South Reed Road and 1001 East Boulevard, Kokomo, Indiana 46904** |
| **County:** | **Howard** |
| **SIC Code:** | **3714 and 3363** |
| **Permit No.:** | **ENSR No.067-10480-00065** |
| **Operation Permit Issuance Date:** | **March 8, 1999** |
| **Amendment No.:** | **T 067-11990-00067** |
| **Permit Reviewer:** | **Gurinder Saini** |

The Office of Air Management (OAM) has reviewed an amendment application from DaimlerChrysler Corporation - Kokomo Transmission and Casting Plant relating to the modification of permit condition related to the operation of the transmissions manufacturing plant.

**History**

On June 17, 1998, Chrysler Corporation - Casting Plant located at 1001 East Boulevard, Kokomo, Indiana 46904 submitted the Construction Permit application (CP-067-9855-00002) to IDEM for a modification of an existing reverberatory furnace no. 4. On August 3, 1998, Chrysler Corporation - Transmission Plant located at 2401 South Reed Road, Kokomo, Indiana 46902 submitted another Construction Permit application (CP-067-10006-00003) to IDEM for construction of four (4) shot blasters. The Office of Air Management determined that both plants are a single source and assigned a new plant identification number 067-00065. Therefore, OAM had combined the application (CP-067-9855-00002) with the application (CP-067-10006-00003) and issued the Enhanced New Source Review and Significant Modification to Part 70 permit (ENSR 067-10480-000065). Based on combining the two applications, it was assumed at the time that the new facilites were all part of the same project.

The #4 Reverb furnace was stack tested in November 1999 and was found to be non-compliant with a PM lb/hour emission limit established for the unit in ENSR 067-10480-00065.

On March 9, 2000, DaimlerChrysler Corporation - Kokomo Transmission and Casting Plant submitted an application to the OAM requesting to modify conditions in the Enhanced New Source Review and Significant Modification to Part 70 permit 067-10480-00065 for the #4 Reverb Furnace.

**Justification for the Modification**

The Enhanced New Source Review and Significant Modification to Part 70 Operating permit is being modified through an Amendment. The ENSR permit is being amended because the Part 70

Operating Permit has not yet been issued.

**Recommendation**

The staff recommends to the Commissioner that the Amendment be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on March 9, 2000.

**Permit Changes**

Permittee requested for following changes in the permit. The changed permit language is shown with **bold** and ~~strikeout~~ method.

Change 1:
The #4 Reverb furnace has a Particulate Matter (PM) emission limit of 0.74 lb/hour in the permit. Permittee has requested to change this limit to 3.2 lb/hour. This changed limit is based on the failed stack tests carried out in November 1999 plus one standard deviation.

The permittee has provided the following justification for changing the PM limit:

1. Installation of #4 Reverb furnace should be considered as an independent modification and not be combined with the shot blasting projects at the transmission plant. This determination would allow the #4 Reverb furnace to have a separate limit, limiting $PM_{10}$ emissions to less than 15 tons per year of $PM_{10}$ emission to avoid triggering PSD review.

   The Permittee had stated in their request that the original #4 Reverb furnace (formerly known as Reverb Furnace D) at the Casting Plant had to be replaced because it suffered a catastrophic failure in the fall of 1997. The shot blasting equipment were replacing older units at the Transmission Plant which were not meeting quality criteria.

2. The #4 Reverb furnace has two stacks. Stack 4 RF exhausts the emissions from the furnace and stack 4 RCW exhausts emissions from the Chargewell (Scrapwell). Emissions from the Chargewell occur mainly during the remelt of scrap aluminum. Air flow rates in standard cubic feet per minute based on November 1999 stack tests conducted on two stacks are as follows:

| | Lowest (scfm) | Average (scfm) |
|---|---|---|
| Furnace | 8845 | 9929 |
| Chargewell | 7573 | 7950 |
| Total | 16,418 | 17,879 |

   Thus the average airflow rate from the emission unit is 17,879 scfm.

Response 1:

OAM after reviewing the initial request, had asked the Permittee to provide proof (applications for funding of projects, justification for the projects in the internal company memo's and any other documentary information) which will substantiate the claim for separate modifications.

The Permittee had submitted additional information on May 15, 2000, which cited text from the New Source Workshop Manual by EPA regarding accumulating emissions for determining PSD applicability:

"If the proposed emissions increase at the major source is by itself (without considering any decreases) less than "significant", EPA policy does not require consideration of previous contemporaneous small (i.e. less than significant) emissions increases at the source."

The permittee also submitted copies of following documents, justifying the four (4) Shot Blasters and the Reverb Furnace as separate projects:

1. Appropriation Request and Project Justification for Shot Blaster units AAA018493 and AAA018494, Dated November 7, 1996.
2. Appropriation Request and Project Justification for Shot Blaster unit AAA006276, Dated November 7, 1996.
3. Appropriation Request and Project Justification for Shot Blaster unit AAA012334, Dated July 12, 1996.
4. Inter Company Correspondence regarding explosion on August 28, 1997 at #4 Reverb Furnace causing complete destruction of furnace and damaging other equipment at plant.
5. Appropriation Request for #4 Reverb Furnace, dated February 6, 1998.

OAM has reviewed the above information with respect to available guidance including "New Source Review Workshop Manual", the guidance letter from John B. Rasnic to George T. Czerniak on "Applicability of New Source Review Circumvention Guidance to 3M - Maplewood, Minnesota."; and a letter about Honda of America dated August 8, 1996, from Region V to Ohio EPA. The main point of each of these guidances is that the Permittee should not try to circumvent the PSD rules by deliberately splitting a "significant" project into two or more smaller projects. The guidance states criterion and examples for determining whether the modifications were split up to avoid PSD review.

OAM has concluded that #4 Reverb Furnace is a unique and separate project which will have a limit of 15 tons per year of $PM_{10}$ emissions to stay PSD minor modification. This determination is based on the following criteria stated in the above referred guidance:

(a) Were the projects proposed over a relatively short period of time (1 year as stated in Honda letter)?

The documents submitted by the Permittee show that, the applications for funding the four Shot Blasters were made in July and November 1996. The application for funding #4 Reverb furnace was made in February 1998. So the two projects were proposed over a year apart.

(b) Could the changes be considered part of single project? In the 3M - Maplewood letter, the USEPA SSCD states "Applications for commercial loans or, for public utilities, bond issues, should be scrutinized to see if the source has treated the projects as one modification for financial purposes. If the project would not be funded or if it would not be economically viable if operated on an extended basis without the other project."

The Inter Company memorandum of September 3, 1997 and appropriation request for the #4 Reverb Furnace replacement dated February 6, 1998, state that, the need to replace the furnace arose because of an explosion at the old furnace which completely destroyed it. As described in the appropriation request, all repair and replacement costs are covered by the insurance claim for the old furnace. There is no mention of any capacity addition or increased production.

Appropriation requests for the shot blasters (planned more than a year before the furnace failure) state "improving quality and reliability" as reasons for implementing new equipment. It does not show any capacity increases or any other references to the #4 Reverb Furnace.

Based on the information presented, OAM does not consider that the four Shot Blasters

and #4 Reverb Furnace constitute a single project.

Hence, the OAM hereby reverses its earlier decision in ENSR Significant Modification to Part 70 Operating Permit No.067-10480-00065 considering the two separate projects as single modification. In this regard the following changes are made to the ENSR permit:

Condition A.2 (e) is modified as follows:

(e) One (1) existing natural gas-fired aluminum melting reverberatory furnace, with a heat input capacity of 20 million British thermal units (mmBtu) per hour, melt rate of 5.10 tons aluminum and granular flux per hour and holding capacity of 82 tons, exhausting through ~~a~~ stack**s** identified as 4RF **and 4RCW**. The existing furnace was originally permitted under Operation Permit No. 067-0002-0295 issued on November 13, 1990.

Condition D.9 (e) is modified as follows:

(e) One (1) existing natural gas-fired aluminum melting reverberatory furnace, with a heat input capacity of 20 million British thermal units (mmBtu) per hour, melt rate of 5.10 tons aluminum and granular flux per hour and holding capacity of 82 tons, exhausting through ~~a~~ stack**s** identified as 4RF **and 4RCW**. The existing furnace was originally permitted under Operation Permit No. 067-0002-0295 issued on November 13, 1990.

As described earlier, the air flow from two stack 4RF and 4RCW will be used to arrive at lbs/hour limit for the #4 Reverb Furnace. Based on the increased air flow rate (17,879 scfm) a new lbs/hour limit is calculated for the #4 Reverb Furnace. Hence, condition D.9.1 (b) is modified as follows:

(b) DaimlerChrysler Corporation - Kokomo Casting Plant:

(1)

| Process / Facility | PM Allowable Emissions | |
|---|---|---|
| | gr./ dscf | lbs./hour |
| Aluminum Melting Reverberatory Furnace (No. # 4) | 0.03 | ~~0.74~~ **4.6** |

Change 2:
Permittee has requested for an annual limit 13.56 tons of PM emission to stay below 11/12th of 15 tons level to avoid triggering PSD.

Response 2:
OAM is no longer following the policy of 11/12th. This change is not implemented. A new condition is added to D.9.1(b) as number (2) limiting PM/$PM_{10}$ emission to less than 15 tons per year to avoid triggering PSD review.

**(2) The Furnace shall limit $PM_{10}$ emissions to less than 0.53 lbs per ton of melt. This will limit $PM_{10}$ to less than 15 tons per year and make 326 IAC 2-2 not applicable**.

The succeeding conditions in D.9.1 (b) are renumbered.

Change 3:
Permittee has requested the melt rate of the furnace be increased from 5.1 tons/hour to 6.5 tons/hour.

Response 3:

Condition A.2 (e) is modified as follows:

(5) One (1) existing natural gas-fired aluminum melting reverberatory furnace, with a heat input capacity of 20 million British thermal units (mmBtu) per hour, melt rate of ~~5.10~~ **6.5** tons aluminum and granular flux per hour and holding capacity of 82 tons, exhausting through stacks identified as 4RF and 4RCW. The existing furnace was originally permitted under Operation Permit No. 067-0002-0295 issued on November 13, 1990.

Condition D.9 (e) is modified as follows:

(e) One (1) existing natural gas-fired aluminum melting reverberatory furnace, with a heat input capacity of 20 million British thermal units (mmBtu) per hour, melt rate of ~~5.10~~ **6.5** tons aluminum and granular flux per hour and holding capacity of 82 tons, exhausting through stacks identified as 4RF and 4RCW. The existing furnace was originally permitted under Operation Permit No. 067-0002-0295 issued on November 13, 1990.

Condition D.9.1 (b) (4) (as per renumbered list in Response 2) is modified as follows:

3. the melt rate shall not exceed ~~5.10~~ **6.5** tons per hour,

Change 4:
Permittee has requested for extension of 120 days time period for stack test.

Response 4:
As the lbs/hour limit in condition D.9.1 (b) has been increased, therefore #4 Reverb Furnace is in compliance with the permit.

**Emission Calculations**

See Appendix A page 1 of 1 of this document for detailed emissions calculations***.***

**Potential To Emit**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

| Pollutant | Potential To Emit (tons/year) |
|---|---|
| PM | 1 |
| PM-10 | 1 |
| $SO_2$ | - |
| VOC | - |
| CO | - |
| $NO_x$ | - |

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

| HAP's | Potential To Emit (tons/year) |
|---|---|
| Chromiium | 0.01 |
| Lead | 0.07 |
| Manganese | 0.2 |
| Nickel | 0.01 |
| HF | 0.07 |
| TOTAL | ***0.36*** |

**Rule Applicability**

There are no changes in the applicable state or federal rules related to these changes.

**Conclusion**

The operation of this transmissions manufacturing plant shall be subject to the conditions of the attached Amendment No. T 067-11990-00065.